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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 09/674,289      | 10/30/2000  | Tapani Vuorinen      | LAIN-033            | 6903             |

20374 7590 10/21/2002

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WASHINGTON, DC 20006

EXAMINER

ALVO, MARC S

| ART UNIT | PAPER NUMBER |
|----------|--------------|
|----------|--------------|

1731

8

DATE MAILED: 10/21/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/674,289

Applicant(s)

VUORINEN, TAPANI

Examiner

Steve Alvo

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 July 2002.
- 2a) ☒ This action is FINAL. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-26 is/are pending in the application.
- 4a) Of the above claim(s) 22 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-21 and 23-26 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_ 6) ☐ Other: \_\_\_\_\_

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The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-14, 18-20 and 22-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over BATES in view of RHA or the ADMITTED PRIOR ART (specification, page 1, lines 14-15) with or without HASSI et al.

BATES teaches forming a fiber suspension, adding component modifying the properties of the fibers (resin, and sizing agent, e.g. CMC or other celluloses) and drying the fiber material, e.g. paper machine or press, see col. 1, lines 15-24 and claim 1. It would have been obvious to add the CMC of BATES under alkaline conditions as BATES teaches the pH to be greater than 5.5 and preferably 7.0 to 9.0 (column 5, lines 39-44). RHA et al teaches adding sizing agents, e.g. CMC, to paper pulp suspensions and teaches that the sizing agent can be added during the beating stage. It would have been obvious to the artisan to add the sizing agent of BATES et al during the beating stage as taught by RHA et al. Or the ADMITTED PRIOR ART teaches that it is known to add polymers prior to the paper machine. It would have been obvious to one of ordinary skill in the art that the CMC of BATES could have been added prior to the paper machine as the addition of additive to the slurry prior to paper formation is well known in the art as evidenced by the ADMITTED PRIOR ART. It would have been obvious to the routineer that the sizing agent also acts to bond the fibers as BATES teaches that the modifying agents increase the paper strength. If this is not obvious then HASSI teaches that sizing agents such as CMC also act as bonding agents.

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Claims 15-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over BATES in view of RHA or the ADMITTED PRIOR ART (specification, page 1, lines 14-15) as applied to claim 1 above, and further in view of HASSI.

HASSI teaches that sizing agents such as CMC could be added during an alkaline peroxide bleach stage. It would have been obvious to add the modifying agents (sizing agents) of BATES during a peroxide bleach stage as such is taught by HASSI.

Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over BATES with or without HASSI as applied to claim 1 above, and further in view of RHA et al.

RHA et al teaches adding sizing agents, e.g. CMC, to paper pulp suspensions and teaches that the sizing agent can be added during the beating stage. It would have been obvious to the artisan to add the sizing agent of BATES et al during the beating stage as taught by RHA et al.

Claims 1-20 and 22-26 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The term “drying” in the specification is defined as the “prior to drying in connection to with e.g. web forming”, page 3, lines 9-11. The paper machine is well known to form the slurry into a web by draining water (drying) through a papermaking wire. However, the claims have separate “drying” and “Papermaking steps”, such is indefinite and inaccurate. The claim needs to be clarified that the “drying” is the same as the papermaking or web forming step.

During a telephone conversation with Mr. Keiko Tanaka Kubovik on January 14, 2002 a provisional election was made with traverse to prosecute the invention of Group I, claims 1-20. Affirmation of this election must be made by applicant in replying to this Office action. Claim

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21 is withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention. This election was confirmed in Paper No. 7.

Applicants' have pointed out that this case is a 371 Application. Accordingly the restriction is corrected below:

Restriction to one of the following inventions is required under 35 U.S.C. § 121 and 372.

This application contains the following inventions or groups of inventions, which are not so linked as to form a single general inventive concept under PCT Rule 13.1.

In accordance with 37 CFR 1.499, applicant is required, in response to this action, to elect a single invention to which the claims must be restricted.

I. Claims 1-20 and 22-26, drawn to a process of producing a modified fiber.

II. Claims 45-49, drawn to a fiber product.

The inventions listed as Groups I and II do not relate to a single general concept under PCT Rule 13.1 because, under PCT Rule 13.2, they lack the same or corresponding special technical features for the following reasons:

Claim 22 is either obvious over or anticipated by BATES. Accordingly, the special feature linking the two inventions, a fiber containing CMC, does not provide a contribution over the prior art, and no single general inventive concept exists. Therefore, restriction is appropriate.

Applicant is advised that the response to this requirement to be complete must include an election of the invention to be examined even though the requirement be traversed (37 CFR 1.143).

Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 C.F.R. § 1.48(b) if one or more of the

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currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a diligently-filed petition under 37 C.F.R. § 1.48(b) and by the fee required under 37 C.F.R. § 1.17(h).

Applicant's amendment, drawn to "before introducing the fiber sdusion to the paper machine, necessitated the new ground(s) of rejection presented in this Office action.

Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

When filing an "**Official**" FAX in Group 1730, please indicate in the Header (upper right) "**Official**" for papers that are to be entered into the file. The "**Official**" FAX phone numbers for this TC 1700 are:

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Any inquiry concerning this communication or earlier communications from the **primary examiner** should be directed to **Steve Alvo** whose telephone number is **(703) 308-2048**. The Examiner can normally be reached on Monday - Friday from **6:00 AM - 2:30 PM (EST)**.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Stanley Silverman, can be reached on 703-308-3837.

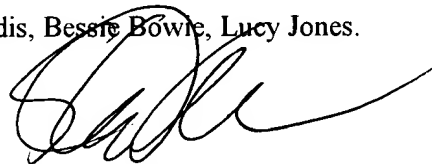
Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the **Group receptionist** whose telephone number is **703-308-0661**.

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**STEVE ALVO**  
**PRIMARY EXAMINER**  
**ART UNIT 1731**

MSA  
10/20/02